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BY

DANIEL GROS*

Abstract

There is an urgent need to link the excessive deficit procedure with the issue of sustainability and hence the evolution of public debt. This note shows that there exists a simple way to introduce the evolution of public debt in the Stability Pact, which so far has focused exclusively on deficits. The link starts from the Maastricht criterion for participation in EMU concerning public debt and its reference value of 60% of GDP. The Maastricht criterion on public debt stipulates that if public debt exceeds 60% of GDP, it must be 'sufficiently diminishing and approaching the reference value at a satisfactory pace''.

This note provides a numerical rule for evaluating whether public debt is indeed diminishing 'at a satisfactory pace'. This numerical rule is in accordance with the reference values in the Treaty and could be used as the basis for an 'excessive debt procedure'.

* Director, Centre for European Policy Studies. This note is based on CEPS Working Document No. 97. The author wishes to thank to Leonor Coutinho for comments and suggestions.

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1. Introduction

The first slowdown of growth experienced since the Stability and Growth Pact (SGP) was negotiated has exposed weaknesses in the operation of the mechanism that was designed to ensure budgetary stability under EMU. This Pact was originally agreed to, after much political pressure from Germany, to ensure that the prohibition against 'excessive' deficits enshrined in the Maastricht Treaty would in reality be obeyed.

The key concern behind the prohibition of 'excessive deficits' in the context of EMU was the fear that they could make price stability more difficult to achieve. The underlying argument is that a high level of public debt can give rise to doubts in the financial markets concerning the sustainability of its level, or rather the high taxes that would be required to service it. This situation might induce governments to put strong pressures on the ECB to bail them out. If this remains the key argument, it follows that the Treaty should have concentrated on debt, rather than deficits. Indeed some recent contributions (see Pisani-Ferry, 2002 and Wyplosz, 2002) have also emphasise debt over deficits, but in as much as they come at the problem from different angles, they arrive at different solutions.

The purpose of this note is to present a simple numerical rule that would allow a precise judgement as to whether a country with an excessive debt level (i.e. above the 60% of GDP threshold) is making progress at a 'satisfactory pace' (to use the language of the Treaty). This rule could be applied easily in the context of the regular examinations carried out in connection with the 'excessive deficit' procedure. This would have the advantage of shifting the focus back to the evolution of public debt.

2. What the Treaty says

To understand the Stability and Growth Pact, it is useful to go back to the Treaty of Maastricht, and more specifically to the second paragraph of Art. 104c (old numbering), which is the key in this respect:

> Article 104c (2):
>
> The Commission shall monitor the development of the budgetary situation and of the stock of government debt in the Member States with a view to identifying gross errors. In particular it shall examine compliance with the budgetary discipline on the basis of the following two criteria:
>
> (a) whether the ratio of the planned or actual government deficit to gross domestic product exceeds a reference value, unless
>
> - either the ratio has declined substantially and continuously and reached a level that comes close to the reference value;
> - or, alternatively, the excess over the reference value is only exceptional and temporary and the ratio remains close to the reference value;
>
> (b) whether the ratio of government debt to gross domestic product exceeds a reference value, unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace.

> The reference values are specified in the Protocol on the excessive deficit procedure annexed to this Treaty.

The Protocol referred to says that the reference value for the deficit is 3% (the deficit of general government as a proportion of GDP) and 60% for debt (the gross debt of general government as a proportion of GDP). These are indeed the numbers that dominate the public discussion, but the Treaty also contains important qualifications that are often overlooked.

In contrast to the provisions concerning the deficit, the one concerning debt does not specify that the level of debt has to stay close to the reference value. The reason for this is quite clear: when the Treaty was negotiated, several countries had debt/GDP ratios in excess of 100%. From this starting point it was clearly impossible to get close to the reference value in any foreseeable future because the debt level is a stock that cannot be changed quickly. A deficit, which is a flow concept, can be adjusted rather quickly, but it takes time for this to have an impact on the debt level. The Treaty just says that the debt/GDP ratio must be moving into the right direction at a certain minimum speed. Thus, for the foreseeable future, the decisive formulation concerning excessive deficits is contained in this short clause in Art. 104c:

> .... unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace.

The crucial question then becomes: what constitutes a sufficiently diminishing debt ratio? This vague formulation should, and can be made more precise. Otherwise there is too much room for disagreement.

3. A concrete proposal

It is not widely appreciated that most of the ambiguity in interpreting what is meant by ‘approaching at a satisfactory pace’ could actually be resolved on the basis of the numbers contained in the Treaty, combined with some simple arithmetic.

The numbers specified as reference values in the Maastricht Treaty are widely perceived as arbitrary because they are not based on an explicit analytical framework. As has been widely observed, however, the two values – 3% of GDP for the deficit and 60% for the debt-to-GDP ratio – are at least coherent with one another if one assumes that nominal GDP grows at 5% per year. This seems (or rather seemed at the time) a reasonable assumption since it corresponds to the growth rate experienced by a relatively good performer in terms of price stability, e.g. Germany, during the 1980s. (During the 1960s and 1970s, nominal GDP actually grew at over 8% in Germany.)

Given this assumption, the two reference values are consistent with each other in the sense that at a 60% debt/GDP ratio and a 3% deficit will leave the debt ratio unchanged. This can be seen by considering the government budget constraint in terms of ratios of GDP, which implies that the change in the debt ratio, denoted by b_t - b_{t-1}, is approximately equal to the deficit, def_t minus an adjustment factor for GDP growth:

(1) $$b_t - b_{t-1} = def_t - b_t * \text{growth of nominal GDP}$$

If nominal GDP grows at 5% this equation implies that the 3% deficit limit will lead automatically to a debt-to-GDP ratio of 60%, since 0.05*0.6 equals 0.03. In terms of the arithmetic of the budget constrain this implies that if def_t equals 0.03, equation (1) can be rewritten as:

(2) $$b_t - b_{t-1} = - 0.05 * (b_t - 0.6)$$

If the debt ratio is initially above 60%, it will decline, and vice versa if it starts out below 60%. It will be constant only if b_t = 0.6 (i.e. 60%). This result depends, of course, on the assumption of a nominal growth rate of 5%. With absolute price stability nominal GDP would grow at only 2% (if one believes official estimates of growth potential in this range). In this case, a deficit of only 1.2% of GDP would be required to keep the debt ratio constant. Vice versa, a balanced budget would imply that the debt ratio declines faster, but in this case it would go towards zero, not 0.6.

For the present discussion, the key implication of equation (2) is that it implies that each year one-twentieth (0.05) of the discrepancy between the actual debt ratio and the Maastricht target would be eliminated automatically even if the deficit is 3% of GDP.

This suggests that the expression in Art. 104c 2b that a debt/GDP ratio above 60% constitutes an excessive deficit 'unless the ratio is sufficient diminishing and approaching the reference value at a satisfactory pace' could be interpreted more precisely as saying that the debt ratio should be declining at least by enough to reduce the distance between the 60% reference value and the starting point by a minimum of 5% per annum. (Fiorito, 2002, has independently come to a proposal that is similar in spirit, but different in its numerical constellation.) If this rule is accepted as the official interpretation of the second part of the definition of 'excessive deficit', any government that has a deficit below 3% of GDP (and that keeps honest accounts) would automatically also satisfy the debt criterion because any country that observes the 3% deficit limit should under ordinary circumstances see its debt-to-GDP ratio automatically decline towards the 60% target. Ordinary circumstances refer here to the implicit assumption behind the combination of the two reference values that nominal GDP growth is 5% (more on this later).

It is not intended that this rule would substitute for the aim of the SGP to ensure that countries keep at a safe distance from the 3% deficit limit. Its purpose would be to complement this aim, and to make explicit the injunction of the Treaty that countries should bring their debt-to-GDP ratios down to sustainable levels.

This rule would not impose an unduly rapid elimination of public debt. If the deficit is equal to 3% of GDP, the speed of convergence towards the target would be slow as only 5% of the difference between the actual debt/GDP ratio and the 60% target would be eliminated each year. But this rule would at least ensure a minimum of convergence and a country that starts with a higher debt level would automatically achieve larger reductions in the debt/GDP ratio. A country that starts with debt equal to 140% of GDP and has a deficit of 3% would 'automatically' achieve a reduction in the debt ratio of 4 percentage points; a country that starts with a debt burden of 90% of GDP would get only 1.5 percentage points.

In order to ensure that the improvement is not transitory, it would be necessary to check whether this criterion has been met over a number of years. This could be verified easily via the following rule:

> *The debt-to-GDP ratio is considered to be 'approaching the reference value at a satisfactory pace' if, over the previous three years, it has been declining continuously and, on average, one-twentieth of the difference between the initial debt ratio and the reference value has been eliminated each year.*

The main reason why even such a slow (at least at first sight) speed of adjustment should be acceptable is that the danger to price stability that derives from a large debt level is much reduced once financial markets see that the debt/GDP ratio is clearly on a durable downwards path.

4. Applying the rule

What would be the implications of the proposed rule in reality? Table 1 shows the results of some illustrative calculations. The first and second columns of this table just show the actual debt/GDP ratios at two points in time: in 1999 (in reality this is end-1998 data) and in 2002. The third column shows the debt/GDP ratio that should have been reached at least if the above-mentioned rule were to be used in the excessive deficit procedure today, with a three-year horizon stretching back into 1999 (the start of EMU). The last column then simply answers the question whether the evolution of debt in the country concerned was 'Maastricht conform', i.e. simply whether the value in the second column is lower than that in the third column. For example, Belgium would pass this test since its debt ratio has declined from about 120% of GDP in 1999 (or rather end 1998) to 105.6% of GDP in 2002, whereas the Maastricht rule would have required a drop to only 108.5% of GDP.

By contrast, Italy would not pass this test as its debt ratio declined only from 116.3% of GDP to 110.3% of GDP between 1999 (end 1998) and 2002, whereas the Maastricht rule would have required a fall to about 106% of GDP. The data from Greece are evaluated for a different time horizon since this country joined EMU two years later. Greece would also not have passed the criterion related to the evolution of public debt as its debt fell only to 102% of GDP (expected for 2003), whereas a Maastricht-conform-reduction should have brought it down to 99.6% of GDP.

Table 1 concentrates on these three cases because at present only three countries have debt-to-GDP ratios clearly in excess of 60% (B, E and IT). This represents considerable progress from the time EMU was being prepared, when there were eight countries in this situation. But five of them (DK, IRL, NL, P and SW) have since made considerable progress and now have debt-to-GDP ratios below or around 60%. It is at any rate apparent that for countries with a debt ratio only slightly above 60%, e.g. around 70%, the required adjustment under the rule proposed here would be minor.

Table 1. 'Excessive debt accumulation'? The evolution of public debt in high debt EMU countries (percent of GDP)

	Actual end 1998	Actual (end) 2002	Required for Maastricht conformity	Evolution of debt Maastricht conform?
Belgium	119.6	105.6	108.5	YES
Italy	116.3	110.3	105.9	**NO**
Greece*	106.2 (end 2000)	102.0 (2003 data)	99.6	**NO**

*Greece's starting point is two years later than the others as the country joined EMU two years later.

Source: Own calculations based on data from *European Economy*, November 2002.

5. The link between deficits and debts

It is noteworthy that neither the Maastricht Treaty nor other official documents uses the accounting identity that the increase in government debt over any given year should be equal to the deficit incurred during that year so that the deficit and the debt criteria are linked.

The simple reason might be that in reality one observes from time to time significant discrepancies between the actual increase in debt and the one that should result from the deficit. Small deviations from this accounting equality would not matter. But the discrepancies that are contained in the official figures (from the Commission's services) for the recent past are so large that they complicate the interpretation of the Maastricht criteria.

The prize for the largest ‘stock flow adjustment’ over the last decade goes to Greece where it exceeded 20 percentage points of GDP in one year alone (1993)! Another example comes from Germany, where in 1995 the debt ratio jumped to 58% of GDP although it should have stayed constant at about 50% of GDP given the small deficit and robust growth during that year. The reason behind this stock flow adjustment of over 8% of GDP was that the federal government took over the debt of the privatisation agency Treuhandanstalt. If the deficits of this agency had been incorporated into the federal budget from the beginning (as they should have been), the general government deficit would have been about 2% points of GDP higher during the previous four years of operation of the Treuhandanstalt. Hence this stock flow adjustment arose from the fact that the previous practice of keeping the Treuhandanstalt off-budget did partially conceal the seriousness of the fiscal situation in Germany.

However, these large, one-time jumps that occurred when public sector accounting was cleaned up in preparation for EMU are less worrying than continuing extra-budgetary debt accumulation. Under EMU, most of the legitimate reasons for the stock-flow adjustment (e.g. borrowing by the central bank to bolster its reserves, a change in the domestic value of debt denominated in foreign currency due to a devaluation) should disappear. The practice of keeping certain items off-budget should then be scrutinised thoroughly. Greece seems to be a particularly important case in point. The Greek debt/GDP ratio has not really declined in recent years despite deficits below 3% of GDP (and growth rates of nominal GDP in excess of 5%). The reason for this is that ‘stock flow adjustments’ in the order of several percentage points of GDP have continued. For example, during 2000 and 2001, Greek public debt increased in both years by 7% of GDP more than one could have been justified by the reported deficit. Other skeletons in the cupboard, which have yet to come out, include the large debts and pension obligations of state-owned enterprises, notably in France.

In cases like this, the deficit numbers are meaningless and the formulation in Art. 104c 2 that ‘The Commission shall monitor the budgetary situation and the stock of government debt in member countries with a view to identifying gross errors’ acquires a real meaning. Reconciling deficit and debt figures should be worth a major effort by the services of the Commission.

It is surprising that there has been no official explanation of these inconsistencies and no official comment on them in terms of the interpretation of the fiscal convergence criteria. (They are mentioned briefly in a recent Communication of the Commission on this subject.) They must clearly be taken into account during the excessive deficit procedure. An increase of the debt ratio (or an interruption of a trend decline) should be cause for concern even if the reported deficit is below 3%.

6. Concluding reflections

The purpose of this note was to present a simple numerical rule that could be used to evaluate whether the debt ratio of countries with public debt far in excess of the Maastricht ceiling is declining at a ‘satisfactory pace’ as required by the Treaty. Such a test should accompany, not substitute for, the Stability Pact.

The starting point of the proposal made here is that a government that keeps the deficit clearly below 3% should also be able to satisfy the debt criterion, provided a) that it does not accumulate other debt outside the budget, and, b) that growth is satisfactory. For a country that satisfies these two conditions, the deficit is thus the key variable even if the debt level is far above the target value of 60%. This might ultimately also be the reason why the Treaty speaks only of an excessive deficit procedure. The debt criterion is needed in addition mostly because the deficit figures can be manipulated more easily.

Unfortunately, however, both conditions cannot be taken for granted.

a) Some countries violate the first condition by accumulating considerable debt off-budget. This seems to be the case of Greece, and to some extent, Italy. It is difficult to explain why the sometimes considerable off-budgetary debt accumulation has so far been virtually neglected in official circles.

b) A deficit of 3% of GDP is at present not enough to achieve the required reduction in the debt ratio for some member countries because the growth rate of nominal GDP is below 5%. While this is unusual by past standards, it might continue for some time as the potential growth rate for many member countries seems now to have fallen below 2% p.a. and the ECB is committed to keep inflation below 2%. A trend growth rate of nominal GDP of around 3.5-4% might thus constitute a more realistic projection for the future, than the 5% implicitly assumed in the Maastricht values.

Would this lower trend growth be a reason to allow for higher deficits? On the contrary: The purpose of the Maastricht criteria and the SGP is to make public debt sustainable. The lower the potential growth rate, the lower the public debt-to-GDP ratio that is sustainable. Hence, there is no reason to allow member countries to run larger deficits because growth is weak.

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